

Appl. No. N/A
National Phase in United States for
International Application No.: PCT/FR03/00085
International Filing Date: January 13, 2004

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 13 (cancelled).

Claim 14 (new): Support for rolling cylindrical elements, this support comprising first guide means capable of guiding the cylindrical elements at a height z_1 , characterized in that downstream in the direction in which the cylindrical elements roll, the said support comprises second guide means capable of guiding the cylindrical elements at a height z_2 higher than z_1 , the friction between the said second guide means and the cylindrical elements being lower than the friction between the first guide means and the cylindrical elements.

Claim 15 (new): Support according to claim 14, characterized in that the said second guide means are capable of authorizing a rotation of the cylindrical elements around an axis of these cylindrical elements.

Claim 16 (new): Support according to claim 14, characterized in that the second guide means comprise at least two ball bearings designed to be in contact with the said cylindrical elements.

Claim 17 (new): Support according to claim 16, characterized in that the said ball bearings are made of stainless steel.

Claim 18 (new): Support of claim 16, characterized in that each ball bearing rests on a number of secondary balls located inside a housing holding the ball bearing.

Claim 19 (new): Support according to claim 18, characterized in that the second guide means comprise two ball bearings each having their housing angled at 45° with respect to a main axis of the support, perpendicular to the direction in which the cylindrical elements roll.

Claim 20 (new): Support according to claim 19, characterized in that the two ball bearings are positioned such that one of them is situated upstream of the other, in the direction in which the cylindrical elements roll.

Claim 21 (new): Support according to claim 14, characterized in that the support comprises a lateral adjustment system for the assembly formed by the first and the second guide means, as well as a vertical adjustment system for this same assembly formed by the first and the second guide means.

Claim 22 (new): Support according to claim 14, characterized in that the support comprises means capable of adjusting the difference between the height z_1 and the height z_2 .

Claim 23 (new): Support according to claim 14, characterized in that the difference between the height z_1 and the height z_2 is approximately 0.5 mm.

Claim 24 (new): Support according to claim 14, characterized in that the first guide means comprise a Vee shaped roller.

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Claim 25 (new): Cylindrical element transport device, characterized in that it comprises at least one support according to any of claims 14 to 24, each support being capable of authorizing the rolling of the said cylindrical elements.

Claim 26 (new): Method of transporting cylindrical elements on at least one support, according to any of claims 14 to 24, characterized in that the cylindrical elements, when they pass on each support, undergo the following steps:

- primary guiding with the aid of first guide means,
- secondary guiding substituting the primary guiding with the aid of second guide means, the friction resulting from the secondary guiding being lower than the friction resulting from the primary guiding.